

PROJECT NUMBER: 1005
PROJECT TITLE: Improved Semi-works Operations
PROJECT LEADER: J. M. Whitman
PERIOD COVERED: March 5 - April 7, 1977
DATE OF REPORT: April 12, 1977

I. Primary Processing

A. Notched Blade Program

1. All of the data were analyzed from the first series of tests. No apparent differences were found between the three notch widths tested or between them and the control with respect to cut filler cylinder volume, sieve fractions, or cigarette making efficiency.
2. In the areas of compacimetric firmness and coal strength, there was a trend favoring the longer strands (higher notch width). Since the control performed better than any of the notched blades in these areas and since it had the highest average particle length, blades with greater notch widths (30 and 36mm) will be ordered.

B. Menthol Losses

A series of tests to evaluate the effects of the type of pump and feed system, the aftercut solutions, and the covering of the gap between the aftercut cylinder and the exit transition piece were run the week of 4/4/77. The data are being analyzed.

C. Neoprene Conveyor Belting

1. The sample of the type belting to be used in the new Manufacturing Center installation has been running on the channel conveyor in the Pilot Primary for ~1800 hours.
2. The surface of the belt which would contact the tobacco is in good condition. However, the back side of the belt has continued to be worn, resulting in a significant build-up of a fine dust on the framework of the conveyor. This degree of wear has not affected the overall integrity of the belt.

II. Blend Component Studies

A. Replacement of ES with RL

1. The differences in filling power, resulting from the

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substitution of RL for ES in the 78-1 and 81-4 Marlboro blends, were difficult to precisely define.

2. The program was, therefore, changed to evaluating each component (ES or RL) in blends, at the 20, 30, and 40% levels, in which the only other component was a single grade of bright. Limited testing to date has shown that for each percent of ES replaced with RL, a loss in filling power of ~0.3% occurs. Additional testing with these type blends is in progress.

B. Blend Components Study V

1. Testing of C.V. - O.V. on each component at three humidity levels (55, 60, and 65% R.H.) was completed.

2. Compacimetric testing of 100% cigarettes made from each component resulted in many low (firm) values. These values were in a range outside of that normally tested. Therefore, the cigarettes will be remade at lower weights and retested.

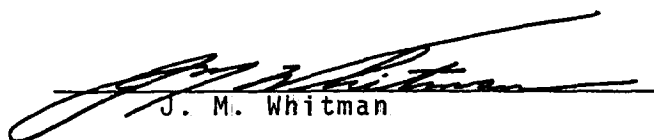
C. Prediction of Tar Delivery

1. Analysis of the ash data on individual grades of bright and burley showed a reasonable correlation with tar delivery. Alkaloids gave a good correlation to nicotine delivered from the bright grades.

2. Additional testing is in progress to define the 95% confidence levels of these correlations.

III. Stem Processing

Work in this area has been placed in a hold position pending the outcome of the RL replacing ES program.


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